**Algebra 1B Name:**

**Final Exam Study Guide #3 Date:**

**Linear Functions**

|  |  |
| --- | --- |
| 1. Convert the following to slope intercept form.   4x + 10y = 20 | 1. Find the equation of the line that passes through the points (-4, 9) and (5, -12). |

3. Describe what it means to be a “solution” to an equation or a system. How can you check that a value or an ordered pair is a solution?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Solve the system by substitution.**

x = 3y + 8

5x + 2y = 6

1. **Use the graph of f(x) and the equation g(x) find the following values.**

|  |  |
| --- | --- |
| **f(x)** | **g(x) = 4x2 – 6** |
| f(2) | g(2) |
| f(-1) | g(-1) |

**6. Draw a sketch of each type of function. Identify a general form equation for each.**

|  |  |  |
| --- | --- | --- |
| **Linear** | **Quadratic** | **Exponential** |
| **Sketch:** |  |  |
| **General Equation Form:** |  |  |

**Simplify the following using exponent rules.**

|  |  |  |  |
| --- | --- | --- | --- |
| 7. (a2b13c2)(a5b9) | 8. ((x4)2)3 | 9. | 10. |

**Solve the following inequalities. (What do you do if you divide or multiply by a negative while solving?)**

|  |  |  |
| --- | --- | --- |
| 11. 2 –5x > 13 | 12. -15c – 28 > 152 | 13. 2x – 3 > 2(x-5) |

18. Solve the following quadratic three ways.

**3x2 -5x -18 = 2x2 -2x**

|  |  |  |
| --- | --- | --- |
| Factoring | Complete the Square | Quadratic Formula |

**Exponential functions:** Write an equation for the following exponential function.

